

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A microelectrode comprising:

a diamond layer formed from electrically non-conducting diamond and containing one or more pins or projections of electrically conducting diamond extending at least partially through the layer of non-conducting diamond, ~~[[and]]~~ the pins presenting areas of electrically conducting diamond and a contact surface or surfaces which can be connected to an external circuit.

Claim 2 (Original): A microelectrode according to claim 1, wherein the pins or projections extend to a surface of the layer of electrically non-conducting diamond presenting areas of electrically conducting diamond co-planar with that surface.

Claim 3 (Original): A microelectrode according to claim 1, wherein the areas of electrically conducting material are recessed relative with a surface of the diamond layer creating a well or reservoir in that surface.

Claim 4 (Original): A microelectrode according to any one of claims 1 to 3, wherein pins or projections of electrically conducting diamond present circular areas of electrically conducting diamond.

Claim 5 (Original): A microelectrode according to claim 3, wherein the well or reservoir contains an additive which presents a surface co-planar with the surface in which the well or reservoir is created.

Claim 6 (Original): A microelectrode according to claim 5, wherein the additive modifies the sensitivity or selectivity of the electrode behaviour.

Claim 7 (Original): A microelectrode according to claim 5 or claim 6, wherein the additive is an electrochemical (bio-)chemical.

Claim 8 (Original): A microelectrode according to claim 1, wherein the areas of electrically conducting diamond are in electrical connection with one or other surfaces of the diamond layer through which they can be connected to an external circuit.

Claim 9 (Original): A microelectrode according to claim 1, wherein the areas of electrically conducting diamond are internally electrically connected within the diamond layer into one or more groups of electrodes.

Claim 10 (Original): A microelectrode according to claim 1, wherein the areas of electrically conducting diamond are externally electrically connected into one or more groups of electrodes.

Claim 11 (Original): A microelectrode according to claim 1, wherein the diamond is synthetic single crystal or polycrystalline diamond.

Claim 12 (Original): A microelectrode according to claim 1, wherein the diamond is CVD synthetic single crystal or polycrystalline diamond.

Claim 13 (Original): A microelectrode according to claim 2, wherein the areas of electrically conducting diamond and co-planar surface are smooth.

Claim 14 (Original): A microelectrode according to claim 2, wherein the areas of electrically conducting diamond and co-planar surface have a surface roughness of less than 100 nmRa.

Claim 15 (Original): A microelectrode according to claim 1, wherein the electrically conducting diamond is boron doped diamond.